1988

# Suger's Stained Glass Masters And Their Workshop At Saint-Denis

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Fig. 2–1 Suger at the Feet of the Virgin, detail of the Annunciation, Infancy of Christ Window. Photo: Cothren. (All details illustrated in this article are originally from Saint-Denis, Abbey Church, ambulatory windows.)

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The twelfth-century stained glass windows of the Abbey of Saint-Denis are among the most important paintings produced during the Middle Ages. Conventionally, they have derived much of their significance from their illustrious context. They form an integral part of Abbot Suger's reconstruction of the church at Saint-Denis, particularly of his choir ambulatory, which was begun in 1140 and consecrated in 1144.[1] Credited with initiating a revolutionary style of architecture we now call Gothic, Suger's choir elevated stained glass to a position of singular importance in an architectural interior. Almost overnight, stained glass became the major medium of painting.

Although often evaluated as the decorative by-product of a change in the system of stone construction, the enhanced role played by stained glass may actually have inspired the architectural revolution with which Suger's windows have been associated. When discussing the completed choir in the account of his administration of the Abbey,[2] Suger reserved rhapsodizing commentary for filtered light,[3] for the ability of the luminous environment created by his stained glass windows to allow the viewer to be transported toward the Godhead. He described his new choir as "that elegant and praiseworthy extension, in the form of a circular string of chapels, by virtue of which the whole church would shine with the wonderful and uninterrupted light of most luminous windows, pervading the interior beauty."[4] Suger's documented interest in stained glass extends from the illuminating potential of the windows themselves to the artists who made them. Although he makes no reference to an architect or master mason, the abbot cites the glass painters on several occasions, singling them out with the metalworkers for special attention.[5]

Given the importance of the ambulatory glazing at Saint-Denis, the fragmentary preservation of the original windows is especially frustrating. The abbey church has been much transformed in the eight centuries since Suger's abbacy, and the fragile stained glass has suffered greatly at the hands of reconstructors, revolutionaries, and restorers. In the 1230s, before Suger's church was even a century old, most of the choir was rebuilt, with only the ambulatory and its windows maintained as a valued relic.[6] During the French Revolution all the glass in the upper stories of the choir and the whole of the nave was sacrificed so that the lead that held the windows together could be made into bullets.[7] Although many of the twelfth-century ambulatory windows escaped this fate, others seem to have been destroyed earlier because of their objectionable subject matter.[8] Those that remained at the turn of the nineteenth century soon left the abbey in the hands of Charles Lenoir, for inclusion in his Musée des monumens français.[9] A contemporary newspaper account claims that some panels were destroyed by an accident in transit to the museum,[10] but others, which Lenoir chose not to exhibit, entered the art market. A number were sold across the Channel into England, where the burgeoning Gothic revival had already created a market for them.[11] The few panels that Lenoir actually exhibited were returned to the abbey at the liquidation of his museum and were subsequently transformed and supplemented in two heavy-handed restorations.[12] Eventually these meager remains of Suger's windows were incorporated within pastiche windows created as a part of the mid-nineteenth-century restoration of the abbey supervised by Viollet-le-Duc. Since it is these neo-Gothic windows that fill most ambulatory openings at Saint-Denis today, the glazing of the abbey is far removed from what Suger saw in 1144.

With close examination, however, it is relatively simple to distinguish the later accretions from the original sections that remain *in situ.* [13] Moreover, many al-

ienated panels have been located over the last four decades in public and private collections in France, Great Britain, and the United States.[14] Though fragmentary in certain instances, the dispersed panels provide sufficient evidence to support many conclusions concerning the original glazing of Saint-Denis, particularly when this primary evidence is coordinated with the contemporary testimony of Suger and reports—both written and graphic—of eighteenth-century witnesses like Bernard de Montfaucon[15] and Charles Percier,[16] both of whom saw the glazing of the ambulatory before it was dismantled by Lenoir. With this information six twelfth-century windows can be identified and partially reconstructed.[17] They were dedicated to the life of Moses,[18] the Allegories of Saint Paul (the so-called Anagogical window),[19] the Tree of Jesse,[20] the Infancy of Christ,[21] the life of Saint Benedict,[22] and the theme of Crusading.[23]

The creators of these six windows are the principal subject of this study, which seeks to demonstrate how, and to what extent, one might isolate the individual artists who produced these large paintings in lead and glass, and then speculate on how they organized their work at Saint-Denis.[24] None of the windows is signed,[25] and no contractual or financial records survive to document the labor of specific individuals.[26] Any attempt to discover artistic identities and to determine social organization and working procedures must rely on three forms of evidence: the written testimony of Suger, detailed analysis of the fragments that remain from the windows, and coordination of this primary evidence with what is known about contemporary practices elsewhere.

Suger cites the makers of his stained glass windows on three separate occasions in his written account of his administration. The first reference is to a material with which they worked and to their funding. When the abbot is thanking "the most liberal Lord" for his generosity in relation to the building project, he lists, as examples of God's beneficence, "the makers of the marvelous windows, a rich supply of sapphire glass, and ready funds of about seven hundred pounds."[27] It is interesting that when referring to lavish funding, Suger would single out the "sapphire" glass, as he does elsewhere in the text.[28] Quantitative chemical analysis has distinguished the blue glass at Saint-Denis from glass stained with other colors, a distinction paralleled in the twelfth-century windows of Chartres and York. The only contemporary counterparts for the chemical composition of this blue window glass are in glasses made in Rome.[29] If, as seems likely, the blue glass was imported, it would probably have been more precious and thus certainly worthy of special notice in the abbot's catalogue of divine munificence.

Suger's other two references to those who made the windows reveal something about the artists themselves. After introducing his discussion of how and why he altered the arrangement, size, furnishings, and appearance of the monks' choir, Suger reports that "we caused to be painted, by the exquisite hands of many masters from different regions a splendid variety of new windows."[30] Thus, there was more than one master glass painter at work at Saint-Denis, and the artistic community was international. Next Suger notes that because the windows were so valuable—in terms of both labor and material costs (again the blue glass is cited specifically)—he decided to appoint "an official master craftsman for their protection and repair."[31] He goes on to report that this permanently installed master was to be maintained from the revenues of the abbey. Thus, the community of glass painters was not entirely transient.

Detailed examination of the surviving work of Suger's glass masters confirms and elucidates this reading of Suger's text. It is possible through formal analysis, for instance, to discern the hands of several painters with distinctive styles among the remaining fragments. Attention will be focused here on three artists: a very active master who worked on the Jesse Tree, Infancy, Anagogical, Moses, and Crusading windows; his collaborator whose work can be found alongside that of the first master in the Infancy and Crusading windows; and a third painter whose extant work at Saint-Denis is confined to a single ensemble, the Saint Benedict window.

The first two masters can be isolated most expediently within the Infancy window. They are easily distinguished through comparisons of heads,[32] such as those of the well-preserved figure of Jeremiah (Fig. 2–2) and the sadly deteriorated Simeon (Fig. 2–3). Since facial typology is so similar in this comparison, the individual variations of articulation introduced by the two artists stand out with some clarity. The artist who painted Jeremiah defined eyes with two even curves, the lower one straighter than that delineating the top of the eye. In the head of Simeon, however, the lower defining line is more sharply bowed and is pulled tightly upward at the outside and closed with a quick, outward stroke. The latter artist—who, for convenience, can be designated the Simeon master—joined the upper bridge of the nose with an arc, connecting the eyebrows to form a continuous, undulating line above the fluid, bulbous eyes. His colleague—the Jeremiah master—left this area unarticulated, maintaining the rather brittle angularity that characterizes his treatment of the flattened eyes. This stiffness is reinforced by the relatively bold downward line that usually branches from their inward point, an area where the Jermiah master placed a soft, curving half-tone wash along a formal contour.

Similar contrasts characterize the way these two painters formed noses, substantial and broad in the case of Simeon, slender and elongated on Jeremiah. The Jeremiah master resolved the inward curve of the fleshy knob that defines the prophet's nostril with a relatively straight, flat line, whereas the Simeon master continued the curve of the nostril downward slightly as if to imply its completion as a circle. Jeremiah's lower lip is defined with a thick, squared bracket, whereas Simeon's is indicated parenthetically with a diminutive curve. In the treatment of hair, the Simeon master drew a single, spaghetti-like strand backwards just above the ear, breaking the regular pattern above and below it, whereas the Jeremiah master created an unbroken mass of hair from overlapping clusters of curved strands.

These two systems of articulation—revealed through subtle details of facial articulation and associated here with the work of two different artists—recur with remarkable consistency from head to head throughout the Infancy window, enabling us to partition much, if not all, of its execution between the Jeremiah and Simeon masters. The features associated with the head of Jeremiah reappear, for instance, in the heads of Herod (Fig. 2–4) and of a sleepy Magus (Fig. 2–5), in spite of the shifts in facial types and expressions, and—in the case of the Magus—in painting technique. The delineation of eyes, the blank area maintained on the bridges of the relatively slender noses, the flattened terminal line of the nostrils, and the squarely bracketed lower lips are comparable in all three heads. The head of Joseph (Fig. 2–6) from the Flight into Egypt, on the other hand, repeats the stylistic hallmarks of the Simeon master: the concave curve over the bridge of the weighty nose; the pinched outer form of the bulbous eye and its soft, half-tone underlining; the downward curving nostril knob; the curved and small lower lip; the strands of hair pulled around the head above the ear. These same distinctions separate the faces of beardless youths and children. The angel in the Magi's dream (Fig. 2–7) and an adoring Shepherd (Fig. 2–8) have facial features conforming to the style of the Jeremiah master, whereas the features of the Christ Child (Fig. 2–9) from the Flight into Egypt conform to the system of articulation used by the Simeon master.

It is relatively easy, then, to demonstrate with detailed photographs the coexistence within the Infancy window of two distinct styles, a situation that suggests the presence of two artists. Judging from the distribution of extant panels between the two painters, they divided their work on the window logically and regularly, with each taking full responsibility for roughly half of its figural panels, partitioned according to the way they would eventually be installed. The Jeremiah master executed the panels that make up roughly the bottom half of the window, the Simeon master those of the upper registers.[33]

What is not so easily reproduced in photographs is related, perhaps more conclusive, evidence that distinguishes the upper and lower registers of the Infancy window not only stylistically but also technically, by the two different ways the two painters have applied paint. The visual indications of this difference in painting technique are fully apparent only when panels can be examined dismounted under carefully manipulated surface light. Nonetheless, hints of the most salient distinctions can be seen even in black and white photographs. The Jeremiah master was a fussy painter (Fig. 2–10), employing short, precise strokes to build up the considerable detail with which he executed all features of his compositions. His technique seems to coincide with the brittle angularity of his style. The Simeon master used longer, broader, bolder, and more fluid brush strokes (Fig. 2–11) which reinforce the confident, curvilinear economy of his style. Since he applied paint more thickly than his colleague, it often bubbled up or fried when fired to create a relief-like quality on the surface of the glass.

Comparable stylistic and technical evidence suggests that the Simeon and Jeremiah masters also collaborated on the Crusading window at Saint-Denis. Here, however, instead of dividing their work panel by panel, they seem to have divided the execution of individual panels, piece by piece. Their collaboration on single panels is most evident in a medallion portraying nine martyred crusaders (Fig. 2–12). The central group of heads in this panel is an unrelated stopgap of thirteenth-century glass and has no bearing on an analysis of the twelfth-century panel itself. It is the flanking groups of heads that are of interest here. That to the right (Fig. 2–13) betrays the by now familiar stylistic signature of the Jeremiah master, while that at the left (Fig. 2–14) can be assigned to the Simeon master. Once again, technical observations reinforce this stylistic sorting.

Although somewhat more difficult to discern, the hands of both artists can also be distinguished in the one other panel that has survived from the Crusading window, a medallion portraying a king leading an army of crusaders. The style of the Jeremiah master, already seen in the right group of crowned figures (Fig. 2–13), reappears in one group of mounted warriors (Fig. 2–15) within this second panel. Note once more the flat terminal line for the profile nostril, the square-bracketed lower lip, the two-stroke eyes. Contrasting with this is the articulation of a second group of warriors (Fig.

2–16), which can be compared with the left group of crowned figures in the martyrs panel (Fig. 2–14), attributable to the Simeon master. The nostrils of the more substantial noses terminate with a downward curl implying circular closure, and the eyebrows continue over the bridge of the nose with a thin, downward-curving line. Though the paint is worn, many of the Simeon master's characteristic features in the delineation of eyes are still visible.

The remainder of this Crusading window is known only through the series of drawings made for Bernard de Montfaucon in the eighteenth century, before the window was dismantled and/or largely destroyed.[34] Although they must be used with extreme caution, the drawings do seem to disclose examples of these two painters' most striking stylistic mannerisms. Three heads from a panel depicting Byzantine envoys before Charlemagne (Fig. 2–17) are clearly related stylistically to the Jeremiah master's heads (Figs. 2–13, 2–15).[35] One of the most peculiar mannerisms of the Simeon master—the elevation of some moustaches high on the cheek as if they grew from the sides of nostrils rather than on the upper lip (Fig. 2–16)—is reproduced in one of the other drawings (Fig. 2–18). Other figures (Fig. 2–19) wear the more naturalistic moustaches and scalloped beards preferred by the Jeremiah mater (cf. Fig. 2–15). If the testimony of the drawings can be trusted for small details such as these, the collaboration of these artists seems to have extended to the execution of the entire window.

The form of collaboration revealed in the Infancy and Crusading windows, in which more than one artist worked on individual components of larger works of art, was not uncommon in the twelfth century. It is apparent on single leaves of illustrated manuscripts,[36] and has also been noted in stone sculpture,[37] a medium that does not lend itself easily to shared execution. Yet the evidence of collaboration on single panels of stained glass—or, more specifically, the internal stylistic incongruities that are its by-product at Saint-Denis in particular—has bothered art historians, especially in the case of the Crusading medallions. Every physical indicator of authenticity in medieval stained glass—the nature of glass, corrosion, paint and grozing—argues for the equal genuineness of the flanking groups of heads in the extant Crusading medallions (Figs. 2–12 through 2–16), but the disparate systems of facial articulation have led to persistent assertions that only one group could be original. It has been presumed that such stylistic dissonance must be the consequence of a recent restoration.[38] But internal stylistic variation resulting from contemporary artistic collaboration is quite logical given the nature of this craft. The panels that compose medieval windows were assembled from many separate pieces of colored glass, which were painted individually and only later joined together with a network of lead to create a single composition. Thus the numerous components of one panel could easily have been distributed among two or more painters for execution.

Further examination of the mid-twelfth–century windows of Saint-Denis suggests that such work sharing was not restricted to figural panels. Considerable formal variation exists in borders, where individual motifs (confined to a single piece of glass) that make up larger ornamental designs (created when the pieces are leaded together) often differ within single panels. For example, within two sections of a border (Fig. 2–20), probably from the Moses window,[39] two distinct designs were employed for the articulation of the three-leaved buds at the base of the axial palmettes (Fig. 2–21) as well as for the extended leaf forms of the lateral palmettes (Fig. 2–22). In both cases, motifs that appear at the same point within the composition of the border were painted with distinct patterns. Taken with the evidence of the Crusading medallions, this suggests that once an overall scheme was established, individual painters were free to use personally conceived conventions for the articulation of foliage or faces within it.

Of the two artists who have thus far been isolated, only one—the Jeremiah master—can be discerned among the other figural panels that remain from the twelfth-century glazing at Saint-Denis. His style recurs in the Jesse Tree, Anagogical, and Moses windows. The heads of "Eclesia" (Fig. 2–23) and "Sinagoga" (Fig. 2–24) from the Anagogical window, for instance, conform to the character of his work in the previously examined windows (Figs. 2–2, 2–4, 2–5, 2–7, 2–8, 2–13, 2–15, 2–17). The most notable features include the two-stroke eyes underlined with a downward dash, the slender nose with flattened nostril knob, the prominent M–like upper lip and square-bracketed lower lip. A head of Christ (Fig. 2–25) from the Anagogical window closely resembles the head of Herod from the Infancy window (Fig. 2–4). Christ's beard and ears are similar to those of one of the martyred crusaders (Fig. 2–13, central head), even if the latter is executed somewhat more boldly. The similarities are even more striking when comparable facial types, such as those of angels from the Anagogical (Fig. 2–26) and Infancy (Fig. 2–7) windows are juxtaposed. Heads from the Moses window (Fig. 2–27), although they vary in pose and type, repeat the Jeremiah master's conventions for eyes, noses, and beards.

If what has survived from these windows is representative of the original wholes, the Jeremiah master

may well have worked essentially alone when he painted the Anagogical and Jesse Tree windows. There is no evidence of the kind of glaring stylistic and technical dichotomies revealed in the Infancy and Crusading windows. Subtle stylistic divergences are evident, but for them to represent collaboration, the artists involved would have to have painted in essentially the same mode and manner. In the Moses window, however, two heads within one medallion (e.g., Fig. 2–28) were clearly produced by someone other than the Jeremiah master. Their isolation within a single panel suggests that they could be either stopgaps or the work of a thirteenth-century restorer rather than a second twelfth-century artist.

The work of a third major twelfth-century painter, however, is clearly discernible in the Saint Benedict window.[40] At first glance his painting (Figs. 2–29 through 2–32) resembles that of the Simeon master (Figs. 2–3, 2–6, 2–9, 2–14, 2–16).[41] Both artists employed bold and rather simplified formulae for facial features and executed them with a fluid, sure sense of line. Somewhat similar conventions are used by both for the articulation of eyes. They are bulbous, have large, prominent pupils, and are pinched to the outside, concluding with lateral slashes. But there are fundamental distinctions between the work of these two artists in further details of facial delineation.

In the work of the Benedict master (Figs. 2–29 through 2–32), eyebrows are not connected over the nose (cf. Figs. 2–3, 2–6, 2–14), and the nose itself continues uninterrupted through the region of the brow with two straight lines. Mouths are flatter, broader, and more relaxed than those of figures painted by either of the other two artists. Noses are straighter, longer, and wider, the broad bridge often pinching the nostrils to create a beaklike effect (Figs. 2–29, 2–31). The prominent eyes are usually defined by two separate strokes, avoiding both the seeming one–stroke continuity of eyes painted by the Simeon master and the stiffness that characterizes the two-stroke eyes of the Jeremiah master. The no-nonsense hairdos in the Benedict window are fashioned with fewer, bolder, simpler lines. The Benedict master chose to emphasize facial hair—or evidence of trimmed facial hair—which the other two artists rarely signaled. Eyebrows are frequently quite bushy (Figs. 2–31 and 2–32), and surfaces that have been shaved—both cheeks (Figs. 2–29, 2–30, 2–31) and tonsures (Figs. 2–30, 2–32)—record the remaining stubble with a series of irregularly spaced slashes or dots.

Though once again difficult to detect in photographs, the Benedict master's painting technique is as distinctive as his style (Fig. 2–33). Like the Simeon master, he applied paint quickly and confidently to create fluid major strokes of articulation. But unlike his colleague, he did not layer paint so thickly that it fried in firing. Alongside, at times overlapping, these principal lines, the Benedict master added considerable detail with smaller, sketchy strokes like those used by the Jeremiah master. In photographs these features are most noticeable in eyebrows, but they are also visible on drapery and in props and plants.

To summarize, then, close stylistic and technical analysis of the panels and fragments that remain from six windows of the twelfth-century glazing of Saint-Denis reveals extensive work by three distinct masters. When more than one master shared the painting of a single window, the nature of their collaboration varied. In the Infancy window two artists apportioned execution of the narrative scenes panel by panel, but in at least one border and in the figural medallions of the Crusading window, collaboration is evident within single panels. In order to evaluate more fully and precisely the working relationships between these painters, the stylistic and technical evidence gleaned from the study of Saint-Denis should be coordinated with a broader understanding of the way artists organized their labor in the twelfth century—that is with current knowledge concerning the nature of medieval artists' workshops.

Unfortunately, information on this subject is severely limited. No contemporary textual documentation exists to outline the way stained glass masters like those at Saint-Denis organized their labor. Indeed, there is more evidence for Saint-Denis than for most sites. As already noted, Abbot Suger reports that his windows were painted by many masters from different regions. He offers no details, however, regarding their working relationship at Saint-Denis and provides no help to the historian who wonders if each master came with a traveling shop of assistants and trainees, or if, instead, all or several masters were called in either to form new shops from the resources of a local work force or to work together within a single collective workshop.

The best documentation for the medieval craft of stained glass is Theophilus Presbyter's *De Diversis Artibus*.[42] But this text, which dates from roughly two decades before the glazing of Saint-Denis,[43] is of limited use in reconstructing workshop practices. Theophilus outlines the steps by which a twelfth-century individual might go about making a window, but his only reference to the division of labor involves the manual assistance of a "boy" who is called on to carry cylinders of freshly-blown glass to the annealing furnace.[44] Theophilus does not explain how a group of individuals

would divide the labor of this complicated enterprise, nor how one might train to become a part of it.

The limitations imposed by the scarcity and nature of written documentation have not, however, prevented modern commentators from formulating and repeating stock conceptions of the nature of the workshop system that organized the production of stained glass windows during the twelfth and thirteenth centuries. That is, even though most of us acknowledge that we know very little with any certainty about the working procedures and social structure of these ateliers before the end of the fourteenth century,[45] we consistently rely on a series of assumptions when discussing workshop practices. Even a cursory review of recent literature reveals the following set of widely accepted postulates.[46]

Assumption 1

Style is the glue that holds the concept of the workshop together, and formal analysis, applied at various levels, is the tool used to isolate and investigate the working of these shops.[47]

Assumption 2

The character of a particular shop is easiest to determine through a study of ornament and overall window design[48] rather than narrative compositions,[49] but the distinguishing of "hands" working within the shops is sought in incidental variations in the details of articulation.[50]

Assumption 3

Individual workshops were usually dominated by the personality of a single master artist.[51] Only occasionally did they unite a small group of master artists adhering to a single stylistic vision.[52]

Assumption 4

Working under the master(s) was a team of variously skilled assistants.[53]

Assumption 5

Distinctions between painters working in a single shop are grounded in qualitative stylistic assessments;[54] the master is always assumed to be the "best" artist.[55] Assistants were generally occupied with what have been considered the less important tasks of making, cutting, and firing the glass.[56] Some of them (especially the "apprentices"—see Assumption 6) may have been allowed to paint ornament or secondary parts of figural compositions,[57] but the master always did the major figural painting, designed the window, and prepared the cartoons which the assistants followed slavishly when they actually participated in the painting. According to this model, the stylistic harmony or unity of a window whose execution was the result of a corporate effort of variously skilled workers is due to the careful supervision of a dominant master.[58] Imbedded in this rather complicated assumption are, of course, further assumptions, for instance that figural painting was more important than the painting of ornament[59] and that medieval windows were supposed to be unified stylistically.

Assumption 6

There was a hierarchy among the many assistants in the workshop. Some were apprentices[60]—masters in training—who gradually took on more and more responsibility for the execution of more and more important parts of the windows designed by their masters and who might eventually have workshops of their own, some inheriting that of the masters with whom they had trained,[61] others leaving to form new shops elsewhere.[62]

Assumption 7

Each shop or master possessed a model or pattern book containing not only standard shop formulae for drapery folds and facial types, but—perhaps more significantly—also designs for the overall composition of windows and the detailed articulation of ornamental motifs.[63] The transmission of model books explains the occasional precision in the transmission of stylistic influence.[64]

Assumption 8

Some workshops traveled, presumably intact, with masters, model books, and workers migrating together from site to site, job to job.[65] Others remained in one location over an extended period, sometimes working under the direction of a succession of masters, some of whom were themselves itinerant.[66]

Some of these assumptions are probably valid, but their uncritical origins and the way they are manipulated to arrive at conclusions are often suspect. Many—perhaps most—may drive from generalizing backwards, consciously or unconsciously, from what is known of artistic workshops in the late Middle Ages and the Renaissance. The problems with such a method are obvious; little else concerning works of art—their appearance, production, and function—remains constant from the twelfth through the sixteenth century. Retroactive reasoning also results in circular arguments buttressed only by a series of shaky assumptions. For example, we assume that there were apprentices, and we expect to find them practicing their work in passages of ornament because we also assume that ornament was less important than figures to the medieval artist and consumer. Consequently, any discovered variation in the design or quality of the articulation of ornament is cited as evidence that apprentices shared in its execution, which

simply recasts the original assumption as conclusion.[67] The questions that stimulated such arguments are generated by the works of art themselves, but the discourse that seeks to answer the questions is often removed both from the experience of the works and from the meager textual documentation surrounding their production. Instead it takes place in the realm of supposition.

Admittedly, arguments based on these widely-held assumptions lead to sensible conclusions grounded in straightforward, commonsense reasoning. Perhaps that explains why they are assimilated so easily and repeated so uncritically. The fundamental problem is to determine how similar modern common sense and the suppositions that support it are to those of medieval artists and patrons. Does the deployment of these sensible assumptions in current scholarship lead to conclusions about the working methods and expectations of medieval creators and consumers or only about those of modern critics and historians?

Significantly, at Saint-Denis the evidence provided by the works of art themselves is often at odds with the claims of modern common sense, notably when the latter argues from a hierarchical distinction between figures and ornament to posit hierarchical distinctions among artists in a medieval shop. The borders of Saint-Denis demonstrate the same assured artistic invention and are executed throughout with the same care and skill as the figural panels.[68] Indeed, because the borders are created from numerous small pieces of glass, each of which had first to be roughly cut out and then delicately grozed to arrive at the precise shape it assumed in the overall pattern (e.g., Fig. 2–20), just as much labor—if not more—may have been required to create ornament as to produce narrative scenes. If borders and other decorative fields had been less important, more economical designs could have been devised for them, as they were during the thirteenth century.[69] Clearly, works of art—the only substantial evidence we have about how artists and shops worked in the twelfth century—must be used to question or refine current working assumptions. Only then can we begin to sort out and relate notions like workshop and master, master and assistant, collaboration and influence.

The analysis of the Saint-Denis glazing may, in fact, provide the occasion for a critical reevaluation of assumptions about workshop practices on an even more fundamental level. It has been argued here that the execution of the Infancy and Crusading windows was entrusted to two artists with distinct personal styles who worked together in harmony. If this thesis is accepted, there is little, if any, justification for using stylistic differences of this sort to isolate workshops at Saint-Denis. Conventionally, however, it has been assumed that each figure style represents the work of a single shop, although assessments of the level at which formal deviation becomes a significant boundary have varied considerably.[70] Once liberated from the restraining assumption that style is necessarily tied to and unified within the workshop unit, however, it becomes possible to envision a different scenario at Saint-Denis, one in which glass masters with distinct, personal styles worked together harmoniously within a single cooperative shop rather than heading a series of independent shops. This hypothesis is bolstered by more objective, material evidence drawn from further examination of the works themselves.

The physical character of the glass in the six windows produced by the three painters isolated here is identical. Bubbles are distributed within the fabric of the material in the same way. The type of corrosion that occurs on both front and back surfaces is comparable, as is the relative thickness of the glass and the peculiar texture and pervasive gentle undulation of its surfaces. This identity of materials from window to window, artist to artist, extends to the famous noncorrosive blue glass, which, as mentioned earlier, is chemically distinct from the other glass and may represent the expensive importation, possibly from Rome, of what Suger proudly refers to as "materiem saphirorum".[71]

The surviving panels further indicate that the three artists also shared pots of paint. The strokes used for articulation—either by blocking light or by modulating its transmission—are created with two distinct types of vitreous enamel, generally employed side by side on the same piece of glass. One of these paints is dark, dull brown in complexion, porous and velvety in character. The other, a shinier paint, has a reddish, rusty cast. It is the physical appearance of these paints which seems to remain constant from panel to panel. As emphasized earlier, the way the three painters applied the paints to the surface of the glass varies considerably and significantly and is important evidence in distinguishing their work. Perhaps the physical characteristics of paint and glass—factors that can be studied only under certain controlled conditions—are more significant evidence than stylistic or even technical variations in defining stained glass workshops,[72] even if style and technique may more clearly separate master from master, or at least painter from painter.[73]

This hypothesis of one large workshop sheltering many masters, rather than several masters heading several shops,[74] however, rests on a heretofore-unexpressed assumption that those who painted the glass and assembled the windows were those who fabricated the

materials from which they were made—that glass making, glass painting, and glazing were all activities performed in the proposed collective workshop. The question might be raised whether a separate workshop of glass makers—and perhaps another of paint makers—supplied several workshops of window painters and makers, each headed by one of Suger's many masters. If so, the nature of materials used would have little bearing on a discussion of how artistic labor was organized.

The idea that glass making, glass painting, and glazing were all activities of a single versatile workshop is not, however, grounded in retroactive reasoning or modern common sense—both of which would, in fact, argue for specialization. Rather, it is based on contemporary written testimony. When Theophilus describes how to make a stained glass window,[75] he instructs his readers to begin by making the glass, and only then to follow through with the designing, cutting, painting, firing, and assembling of the final product. He does not indicate a division of labor between the fabrication of materials, on the one hand, and artistic creation, on the other. Indeed, all that he says suggests that there was no such division that time.[76]

Before they can be generalized to any extent, both the hypothesis of a collective workshop sheltering many glass masters and its underlying assumption, rooted in Theophilus's testimony concerning the self-sufficiency of twelfth-century stained glass workshops, should be tested against the stylistic, technical, and physical evidence of windows produced elsewhere at this time, or slightly later. My own preliminary work on the early glazing of Rouen Cathedral as it survives in the "Belles Verrières" (ca. 1200–1202) has revealed indications of comparable procedures in at least one other case.[77] There, as at Saint-Denis, windows of differing styles appear to have been produced contemporaneously. Distinctions in painting technique, which underscore differences in style, suggest execution by more than one artist, but, as at Saint-Denis, the windows were made from the same materials. Unfortunately, the kind of study necessary to reach such conclusions is not possible for all windows. It requires examination from close range under carefully regulated lighting conditions. Since it can only be accomplished on dismounted panels, dispersed—or partially dispersed—windows, such as those from Saint-Denis and Rouen, are more accessible than those *in situ*, which can be studied only when they are removed for restoration.[78]

This investigation of three master painters from Saint-Denis, then, is offered as a modest, preliminary case study, demonstrating what can be learned about stained glass masters and workshops if, instead of using uncritically formulated and accepted assumptions to evaluate works of art, we use the works of art themselves to evaluate—indeed to establish—those assumptions. Unquestionably there was considerable collaboration on medieval stained glass windows, yet this need not have coincided with a hierarchical division of labor within workshops. It may have been a response to the desire for stylistic diversity. Internal formal variation, in other words, may not have been the unfortunate and unavoidable result of the means of production, or—as has recently been proposed—the price that had to be paid for hasty execution;[79] it may have been cultivated.

This taste for variety appears not to have been restricted to Saint-Denis or to twelfth-century windows. John James's breathtakingly detailed study of Chartres—even if divorced from his theories, conclusions, and interpretations—has called seriously into question, in the case of that monument, the myth that stylistic homogeneity of parts was dictated by a single dominant master or artist of genius in charge of the whole.[80] Indeed most—perhaps all—architectural complexes of the twelfth and thirteenth centuries are characterized by a staggering variety in the execution of details, which modern scholars often tend to evaluate as the unfortunate by-product of halted campaigns, later restoration, or misguided continuation. Perhaps it is time art historians ceased being uncomfortable with what may be evidence of enormous artistic vitality in the early Gothic period.[81]

Far from being troublesome to Suger, the stylistic diversity characterizing his windows was apparently a source of great pride. His esteem for variety—be it manifest in the quality of pearls or in the national origin of artists—runs through his discussions of the reconstruction of his choir like a leitmotif. Not only did he bother to mention the masters who painted his windows, he recorded for posterity two pieces of information about these artists—their number and the diversity of their origins. When viewed with eyes unclouded by specious assumptions, even individual windows support both of Suger's claims.

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## Notes

* The research for this article was generously supported by grants from the National Endowment for the Humanities, the J. Paul Getty Trust, and the Faculty Research Fund of Swarthmore College. The material presented was first delivered

at the Nineteenth International Congress of Medieval Studies (Kalamazoo, 1984) as part of an ICMA Symposium on Medieval Workshop Practices and subsequently reshaped for talks at Penn State, Mount Holyoke College, the University of Arkansas at Little Rock, Columbia University (The Robert Branner Forum for Medieval Art), and Hollins College. I have benefited greatly from lively discussions with auditors on each of these occasions, but I would like to single out my debt to Donald Royce-Roll who pointed out at Kalamazoo my own reliance on a then unexpressed and unevaluated assumption that medieval stained glass workshops made—as well as painted—glass. My study of Suger's texts in relation to what they reveal about the masters who created the windows has been guided by several valuable discussions with Thomas G. Waldman, who is currently preparing a new translation of *De Administratione*. As with all my work on the windows of Saint-Denis, this study would have been impossible without the cheerful cooperation of those who have provided access to the fragmentary remains of Suger's glazing: Lachlan Pitcairn, the Reverend Martin Pryke, Stephen Morely, and Joyce Bellinger at the Glencairn Museum; Jane Hayward and Timothy Husband at The Cloisters; Jean-Jacques Gruber, maître verrier; Catherine Brisac of the Ministère de la Culture; Jean-Marie Bettembourg at the Laboratoire des monuments historiques; Dennis and Michael King of King and Sons, Norwich; Peter Gibson of the York Glaziers Trust; D. Michael Archer and Agnes Cairnes at the Victoria and Albert Museum; the Reverend K. W. Bastock, vicar of Twycross; the Reverend J. L. G. Lever, former rector of Wilton; Linda Fraser and Robert Marks at the Burrell Collection; the Lord Barnard and Elizabeth Steele at Raby Castle. I am equally grateful for the advice and encouragement of a host of colleagues, especially Elizabeth A. R. Brown, Madeline Harrison Caviness, William W. Clark, and Jane Hayward. Close and perceptive readings of an earlier version of this text by friendly editors, Susan Lowry and Joan Vandergrift, are largely responsible for any grace and clarity of written expression in its current form.

1 For the architecture of Saint-Denis, see more recently Sumner McKnight Crosby, *The Royal Abbey of Saint-Denis from its Beginnings to the Death of Suger, 475–1151*, New Haven, 1987, esp. pp. 215–265, with references to the rather extensive previous bibliography.

2 For Suger's texts (until the appearance of a new edition and translation by Thomas G. Waldman), see *Abbot Suger on the Abbey Church of Saint-Denis and its Art Treasures*, ed. and trans. Erwin Panofsky, second edition ed. Gerda Panofsky-Soergel, Princeton, 1979.

3 The precise meaning of the "light" represented by these windows has received considerable scholarly attention lately. The traditional, face-value interpretation of the windows as conveyers of pervasive interior luminosity (e.g., Otto von Simson, *The Gothic Cathedral*, Princeton, 1962, pp. 21–58; and Louis Grodecki, *Le vitrail roman*, Fribourg, 1977, pp. 12–16) has been challenged by an assertion that the stained glass—especially the high concentration of blue glass—represented darkness, the embodiment of Pseudo-Dionysian divine gloom (John Gage, "Gothic Glass: Two Aspects of a Dionysian Aesthetic," *Art History*, 5, 1982, pp. 36–58; and Meredith Parsons Lillich, "Monastic Stained Glass: Patronage and Style," *Monasticism and the Arts*, ed. Timothy Gregory Verdon, Syracuse, New York, 1984, pp. 207–254). It might be worth considering as well the possibility that darkness and luminosity were juxtaposed in these windows, that the blue backgrounds represented a divine gloom out of which the mostly non-blue subjects (meant, according to Suger, to be "illuminating") would glow. Regardless of the value placed on the "light," however, the desire for windows per-se could have inspired the significant architectural advances. Crosby (*Royal Abbey of Saint-Denis from its Beginnings*, pp. 236–237) has pointed out that when viewed from Suger's position at the high altar, the architecture of the lower story would have practically disappeared, highlighting the series of chapel windows as a "crown of light."

4 *Abbot Suger on the Abbey Church*, ed. Panofsky, pp. 100–101: "illo urbano et approbato in circuit oratoriorum incremento, quo tota clarissimarum vitrearum luce mirabili et continua interiorem perlustrante pulchritudinem eniteret."

5 *Ibid.*, pp. 52–53, 72–77. In the first instance, Suger uses the word "operarius" for the makers of the windows. In the second passage, however, he refers to them as "magister", a title he employs elsewhere only in reference to the metalworkers. Suger also mentions "sculptores." In one instance they are the metalworkers who made the western doors (*ibid.*, pp. 46–47), and in

another a sculptor—also a metal worker—is credited with the transformation of the antique porphyry vase into an eagle (*ibid.*, pp. 78–79). In a third reference (*ibid.*, pp. 33–34), Suger couples sculptors—this time clearly workers in stone—with masons and stonecutters as "operarius," but in a fascinating recent study, C. R. Dodwell has argued that these "sculptores" should probably not be thought of as the carvers of the portal sculpture: "The Meaning of 'Sculptor' in the Romanesque Period," in *Romanesque and Gothic: Essays for George Zarnecki*, Woodbridge, England, 1987, pp. 49–61 (for Suger's references to sculptors, pp. 52–53, 56–57).

6 If there were stained glass windows in the upper story of Suger's choir, they may have disappeared at this point, though they could also have been adapted for reuse in the new Rayonnant openings. For the thirteenth-century architectural reconstruction, see Caroline Bruzelius, *The Thirteenth-Century Church at Saint-Denis*, New Haven, 1986; for its effect on the glazing, see Louis Grodecki, *Les vitraux de Saint-Denis, étude sur le vitrail au XIIe siècle* (Corpus Vitrearum Medii Aevi, France, Etudes, 1), Paris, 1976, pp. 29–32.

7 Grodecki, *Vitraux de Saint-Denis*, pp. 39–41.

8 In 1793 all "feudal" and royal imagery was ordered suppressed (*ibid.*, p. 39), and the series of medallions depicting the First Crusade doubtless disappeared at this point. For them, see Elizabeth A. R. Brown and Michael W. Cothren, "The Twelfth-Century Crusading Window of the Abbey of Saint-Denis: 'Praeteritorum enim Recordatio Futurorum est Exhibitio,'" *Journal of the Warburg and Courtauld Institutes*, 49, 1986, pp. 1–40.

9 Grodecki, *Vitraux de Saint-Denis*, pp. 42–46.

10 Reported anonymously in *Journal de Paris*, 8 pluviôse an X (January 17, 1802), pp. 766–767.

11 For the collusion of Lenoir and his glazier, Tailleur, with dealers, see Grodecki, *Vitraux de Saint-Denis*, pp. 45–46.

12 *Ibid.*, pp. 46–56.

13 This process was initiated by Louis Grodecki in the 1950s, and his own efforts are summarized in *Vitraux de Saint-Denis*.

14 For an inventory of what had been discovered by 1976, see *ibid.*, pp. 63–80. To this census should be added several panels from the Infancy of Christ and Benedict windows, for which, see Michael W. Cothren, "The Infancy of Christ Window from the Abbey of Saint-Denis: A Reconsideration of Its Design and Iconography," *Art Bulletin*, 68, 1986, pp. 398–420; and David O'Connor and Peter Gibson, "The Chapel Windows at Raby Castle, County Durham," *The Journal of Stained Glass*, 18/2, 1986–87, pp. 127–128.

15 Lost medallions from the Crusading window are discussed and reproduced with engravings in Bernard de Montfaucon, *Les monumens de la monarchie françoise, qui comprennent l'histoire de France, avec les figures de chaque règne que l'injure des tems a épargnes*, Paris, 1729–1733, vol. 1, pp. 277, 384–397, pls. XXIV–XXV, L–LIV. Even more important than the published engravings are eleven of the original drawings from which they were taken, made for Montfaucon before 1729 and now in Paris, Bibliothèque Nationale, MS fr. 15634, fols. 107, 150–151, 158–164, 166. For the drawings, see Brown and Cothren, "Crusading Window," esp. pp. 6–7, 39–40.

16 The invaluable drawings of Charles Percier were executed at Saint-Denis in 1795 and are now in the Bibliothèque municipale in Compiègne. On them, see Grodecki, *Vitraux de Saint-Denis*, pp. 40–41, and George Huard, "Percier de l'abbaye de Saint-Denis," *Les monuments historiques de la France*, 1, 1936, pp. 134–144, 173–182.

17 I am not including among these windows scenes of the martyrdom of Saint Vincent and the application of the Signum Tau which have traditionally figured in discussions of the twelfth-century glazing of Saint-Denis. See Grodecki, *Vitraux de Saint-Denis*, pp. 103–107; *idem*, "Un *Signum Tau* mosan à Saint-Denis," *Clio et son regard, Mélanges Jacques Stiennon*, Liège, 1983, pp. 337–356; and Jane Hayward, in Sumner McKnight Crosby, et al., *The Royal Abbey of Saint-Denis in the Time of Abbot Suger (1122–1151)*, exhibition catalogue, The Metropolitan Museum of Art, New York, 1981, pp. 92–93. These two panels were restored to Saint-Denis by Lenoir when his museum closed, but he returned a considerable amount of glass not originally from the abbey along with the panels he had removed from it, notably glass from

Saint-Germain-des-Prés and the Templar chapel at Sainte-Vaubourg. By excluding them from the discussion here, I am arguing not that the Saint-Vincent and Signum Tau panels do not come from Saint-Denis but simply admitting that nothing other than their current location associates them with the twelfth-century glazing of the abbey. In the case of the other six windows, on the other hand, in addition to the survival of numerous panels of glass, we also have either the contemporary testimony of Suger or the reports of prerevolutionary observers. For these reasons it seemed wise to set these two panels aside in the context of the current study.

18 All five scenes cited by Suger (*Abbot Suger on the Abbey Church*, ed. Panofsky, pp. 74–77) in the Moses window still survive at Saint-Denis, even if some are heavily restored. For this window, see Grodecki, *Vitraux de Saint-Denis*, pp. 93–98, and *idem*, "Vitraux allégoriques de Saint-Denis," *Art de France*, 1, 1961, pp. 19–46.

19 Only two medallions have survived from the Anagogical window, and both are now installed at Saint-Denis. This window is also cited by Suger (*Abbot Suger on the Abbey Church*, ed. Panofsky, pp. 74–75), and he documents four of the panels by recording their inscriptions. Of these four, one can be identified with an extant medallion. Its surviving companion is not cited by Suger, presumably because it does not have an elaborate inscription. For this window, see Grodecki, *Vitraux de Saint-Denis*, pp. 93–94, 98–102; *idem*, "Vitraux allégoriques;" and Konrad Hoffmann, "Suger's 'Anagogisches Fenster' in St. Denis," *Wallraf-Richartz-Jahrbuch*, 30, 1968, pp. 57–88.

20 Suger notes the inclusion of this window in his glazing program (*Abbot Suger on the Abbey Church*, ed. Panofsky, pp. 72–73), but unlike the Anagogical and Moses windows, he does not describe it. A substantial portion of the window is still installed at Saint-Denis, more than any of the other six windows discussed here. In addition, several figural and ornamental panels have been discovered elsewhere. One king is partially preserved within a panel now in the Musée des Beaux-Arts in Lyon, and two prophets are installed in the parish church of Saints Mary and Nicholas in Wilton, England. Practically all of the border and ornament of the current window are modern, and elsewhere only one border palmette has survived (London, Victoria and Albert Museum). Pieces of the ornament that filled the interstices created outside the half-medallions holding the prophets were drawn by Charles Winston in 1846 when they were in a private collection (London, British Library, Add. MS 35211, vol. 4, fol. 318), but they have since disappeared. For the Jesse Tree window, see Grodecki, *Vitraux de Saint-Denis*, pp. 71–80.

21 Unlike the previous three windows, Suger does not mention this one, although it contains a portrait of the abbot himself kneeling at the feet of the Virgin in the scene of her Annunciation. It is not inconceivable that it postdates his death by a few years (see Brown and Cothren, "Crusading Window," pp. 35–37; cf. Madeline Harrison Caviness, "Stained Glass at Saint-Denis: The State of Research," *Abbot Suger and Saint-Denis: A Symposium*, ed. Paula Lieber Gerson, New York, 1986, pp. 266–267), but there is no question that it dates from the original, mid twelfth-century glazing. Very little of the Infancy window remains today at Saint-Denis, but much of it has been found elsewhere. See Cothren, "Infancy of Christ Window."

22 No glass from this window remains at Saint-Denis, and it is not cited by Suger. Percier drew the lower portion of the window at the end of the eighteenth century, however, assuring its Dionysian provenance. This is the least thoroughly studied component of the Saint-Denis glazing, and no convincing reconstruction has yet emerged. In addition to several panels and fragments of the border, nine figural scenes or fragments of figural scenes remain. There are in France (two at Fougères and one in Paris at the Musée de Cluny), and six are in England (four at Twycross, one on loan from Christchurch Borough Council to the Victoria and Albert Museum, one only recently discovered at Raby Castle). A tenth figural fragment is known from a tracing made by Juste Lische, a glass painter working at Saint-Denis in the middle of the nineteenth century. For the Benedict window, see Grodecki, *Vitraux de Saint-Denis*, pp. 108–114. For the Raby panel, which was unknown to Grodecki, see O'Connor and Gibson, "The Chapel Windows at Raby Castle," pp. 127–128.

23 Only two panels have survived from the Crusading window, both now in the Glencairn Museum, Bryn Athen, PA. Twelve related medallions, however, were recorded by Montfaucon (see

note 15 above) before their destruction, presumably during the French Revolution when their "feudal" subjects were precisely what anti-royal iconoclasts found most objectionable. None of Percier's sketches can be coordinated convincingly with the ensemble. See Brown and Cothren, "Crusading Window," where it is argued, on iconographic evidence, that this Crusading window probably dates from the abbacy of Suger's successor, Odo of Deuil. Cf. Grodecki, *Vitraux de Saint-Denis*, pp. 115–121; *idem*, *Le vitrail roman*, pp. 95, 290; Hayward, in *The Royal Abbey of Saint-Denis in the Time of Abbot Suger*, pp. 94–97; and *idem*, in Jane Hayward and Walter Cahn, et al., *Radiance and Reflection. Medieval Art from the Raymond Pitcairn Collection*, exhibition catalogue, The Metropolitan Museum of Art, New York, 1982, pp. 90–95; where the fourteen known scenes are divided between two fourteen-panel windows that would have formed a diptych within the original Sugerian glazing, one side recounting the life of Charlemagne and the other the events of the First Crusade.

24 For the possibility that the glazing represented by these six windows extended into the 1150s under the abbacy of Suger's successor, Odo of Deuil, see Brown and Cothren, "Crusading Window."

25 Though uncommon, twelfth-century artists' signatures are known in various media. The best-known instance in glass is the inscribed self-portrait that identifies Gerlachus as the artist of the windows from the Abbey of Arnstein an der Lahn. See Grodecki, *Le vitrail roman*, pp. 151–160, 268–269, esp. figure 128.

26 Little information of this sort survives for artists during the twelfth century, though it does become available by the late thirteenth and is relatively rich for the fourteenth century. For documentation on glass painters, see the important article by Meredith Parsons Lillich, "Gothic Glaziers: Monks, Jews, Taxpayers, Bretons, Women," *Journal of Glass Studies*, 27, 1985, pp. 72–92.

27 "Qui enim inter alia majora etiam admirandarum vitrearum operarios, materiem saphirorum locupletem, promptissimos sumptus fere septingentarum librarum aut eo amplius administraverit, peragendorum supplementis liberalissimus Dominus deficere non sustinebit." *Abbot Suger on the Abbey Church*, ed. Panofsky, pp. 52–53.

28 E.g., *ibid.*, pp. 76–77. For the nature and significance of this "saphirorum materia" at Saint-Denis, see Gage, "Aspects of a Dionysian Aesthetic," pp. 42–46; and Lillich, "Monastic Stained Glass," pp. 222–225.

29 Robert H. Brill and Lynus Barnes, "Some Chemical Notes," in Crosby, et al., *Royal Abbey of Saint-Denis in the Time of Abbot Suger*, p. 81; and Cothren, "Infancy of Christ Window," pp. 407–408, esp. notes 37, 41.

30 "Vitrearum etiam novarum praeclaram varietatem, ab ea prima quae incipit a *Stirps Jesse* in capite ecclesiae usque ad eam quae superest principale portae in introitu ecclesiae, tam superius quam inferius magistrorum multorum de diversis nationibus manu exquisita depingi fecimus." *Abbot Suger on the Abbey Church*, ed. Panofsky, pp. 72–74.

31 "Unde, quia magni constant mirifico opere sumptuque profuso vitri vestiti et saphirorum materia, tuitioni et refectioni earum ministerialem magistrum ..." *Ibid*, pp. 76–77.

32 In this study I will concentrate almost exclusively on comparisons of facial articulation in documenting the stylistic distinctions between Suger's artists. The number of details that can be reproduced as illustrations here is limited, and the stylistic singularities are most salient with faces. The personal styles of the three artists do, however, extend to the delineation of drapery and the execution of ornamental detail, both in the character of line and in the design of systems of articulation.

33 The line that divides their work in the window runs between the register of the Adoration of the Magi and that of the Presentation in the Temple. See Cothren, "Infancy of Christ Window," fig. 20.

34 For these drawings, see note 15.

35 A further confirmation of the eighteenth-century draftsman's accuracy in reproducing medieval styles is provided by the head of Charlemagne in this same drawing, which is unlike the work of either the Jeremiah or the Simeon master but is stylistically equivalent to a head by a thirteenth-century restorer in one of the extant medallions. See Brown and Cothren, "Crusading Window," pp. 3–4, pl. 4a–b.

36 Robert Branner, *Manuscript Painting in Paris during the Reign of Saint Louis: A Study of Styles*, Berkeley, 1977, p. 11.

37 Sylvia Pressouyre, *Images d'un cloître disparu ... le cloître de Notre-Dame-en-Vaux à Châlons-sur-Marne*, Paris, 1976, p. 101.

38 Grodecki, *Vitraux de Saint-Denis*, pp. 120–121; Hayward, in *Royal Abbey of Saint-Denis in the Time of Abbot Suger*, p. 96; and *idem*, in *Radiance and Reflection*, p. 93. This discussion also involves a modern copy of the panel now in the Museo Civico in Turin. See Brown and Cothren, "Crusading Window," pp. 4–5.

39 For these borders and the previous bibliography discussing their affiliation with Saint-Denis and association with the Moses window, see *Stained Glass before 1700 in American Collections: Mid-Atlantic and Southeastern Seaboard States* (Corpus Vitrearum, United States, Checklist II), *Studies in the History of Art*, 23 (Monograph Series), Washington, 1987, p. 102.

40 It is quite possible that two painters, working in a very closely related style and technique, were responsible for this window. The clearest suggestion of variation appears in the best-preserved panel from the window, now in the Musée de Cluny, where one figure is painted with a delicacy and fluidity that contrasts subtly with his more stiffly and boldly articulated companion. Since this panel has not been made available to me for study, however, it is impossible to evaluate with any confidence whether this distinction most likely indicates the collaboration of two artists or variation within the work of a single artist. Here, therefore, I will discuss the window as the work of a single painter.

41 This superficial relationship has led to some interpretive confusion: Hayward, in *Royal Abbey of Saint-Denis in the Time of Abbot Suger*, p. 80.

42 This work has been published twice in English translation, in one instance (Dodwell) with a parallel edition of the Latin text: Theophilus, *On Divers Arts*, ed. and trans. John G. Hawthorne and Cyril Stanley Smith, Chicago, 1963 (reprinted New York, 1979); Theophilus, *De Diuersis Artibus. The Various Arts*, ed. and trans. C. R. Dodwell, London, 1961.

43 For the dating of Theophilus's treatise, see Lynn White, jr., "Theophilus Redivivus," *Technology and Culture*, 5, 1964, p. 224–233; and John Van Engen, "Theophilus Presbyter and Rupert of Deutz: The Manual Arts and Benedictine Theology in the Early Twelfth Century," *Viator*, 11, 1980, p. 147–163.

44 "... da puero, qui inducto ligno per foramen eius portabit in furnum refrigerii ....": *De Diuersis Artibus*, ed. and trans. Dodwell, p. 40.

45 For a good introduction to what is known and for references to the previous literature that discusses the documentation, see Lillich, "Gothic Glaziers." For examples of those who acknowledge the lack of documentation before proceeding to a discussion of particular workshop situations, see Madeline Harrison Caviness, *The Early Glass of Canterbury Cathedral*, Princeton, 1977, p. 37 note 3; Virginia Chieffo Raguin, "The Jesse Tree Prophet: In the Workshop Tradition of the Sainte-Chapelle," *Worcester Art Museum Journal*, 3, 1979–80, p. 31; *idem*, *Stained Glass in Thirteenth-Century Burgundy*, Princeton, 1982, p. 73; Louis Grodecki and Catherine Brisac, *Le vitrail gothique*, Fribourg, 1984, pp. 28–32. This situation is not confined to the study of stained glass: Lydwine Saulnier and Neil Stratford, *La sculpture oublié de Vézelay* (Bibliothèque de la Société française d'archéologie, 17), Paris, 1984, p. ix; Branner, *Manuscript Painting in Paris*, pp. 6, 11.

46 The citations in the following footnotes seek to document with specific examples instances where the assumptions catalogued have guided scholarly discussions of the relationship between workshop practices and the history of stained glass. There is no attempt whatsoever to be comprehensive. I intend, rather, to choose either from the work of those scholars (like Grodecki) who have established the principal assumptions or from the readily accessible work of others who, in the study of particular monuments, have addressed directly the problems of interpreting twelfth–and thirteenth–century stained glass workshops.

47 This identification of style with workshop was codified by Louis Grodecki in a path-breaking article outlining a method for the study of stained glass that has been used by most subsequent scholars: "A Stained Glass *Atelier* of the Thirteenth Century: A Study of the Windows in

the Cathedrals of Bourges, Chartres and Poitiers," *Journal of the Warburg and Courtauld Institutes*, 11, 1948, pp. 87–111 (republished in the original French in *idem*, *Le moyen age retrouvé, de l'an mil à l'an 1200*, Paris, 1986, pp. 437–476). For studies in which Grodecki puts his own method into practice, see "Le maître de saint Eustache de la cathédrale de Chartres," *Gedenkschrift Ernst Gall*, Munich, 1965, pp. 171–194 (reprinted in *Le moyen age retrouvé*, pp. 521–543); "Le 'maître du Bon Samaritain, de la cathédrale de Bourges," *The Year 1200: A Symposium*, New York, 1975, pp. 339–359 (reprinted in *Le moyen age retrouvé*, pp. 477–494). In his delineation and discussion of workshop style, Grodecki uses the words "maître" and "atelier" almost interchangeably. He does acknowledge that in some instances (cited below) a group of artists worked within an "atelier," but he rarely makes hierarchical distinctions between them by designating one as the "maître" of the "atelier" and the remainder as assistants. Grodecki's scholarly apprentices were not as circumspect. For examples of their work, grounded in the master's stylistic method, see Hayward, in *Radiance and Reflection* (e.g., pp. 152–155); *idem*, in *Royal Abbey of Saint-Denis at the Time of Abbot Suger*, pp. 65–67; Madeline H. Caviness and Virginia Raguin, "Another Dispersed Window from Soissons: A Tree of Jesse in the Sainte-Chapelle Style," *Gesta*, 20, 1981, pp. 191–198; Linda Morey Papanicolaou, "Stained Glass from the Cathedral of Tours: The Impact of the Sainte-Chapelle in the 1240s," *Metropolitan Museum Journal*, 15, 1981, pp. 53–66; Michael W. Cothren, "The Thirteenth- and Fourteenth-Century Glazing of the Choir of the Cathedral of Beauvais," Ph.D. Dissertation, Columbia University, New York, 1980, pp. 48, 147–148, 175–180, 268; *idem*, "The Seven Sleepers and the Seven Kneelers: Prolegomena to a Study of the 'Belles Verrières' of the Cathedral of Rouen," *Gesta*, 25, 1986, pp. 216–218. This use of style to define workshops (in the absence of any written documentation) is not, of course, peculiar to studies of medieval stained glass. See, for instance, Branner, *Manuscript Painting in Paris*, whose statement (p. 11) that "a style of painting constituted the tradition of an atelier. I regard this as a fundamental point, so much so that in fact I shall use the terms 'style' and 'atelier' almost interchangeably," characterizes Grodecki's method as well.

48 The basis for this seems to be the order and weight of discussion in Grodecki, "Stained Glass *Atelier*." See Caviness, *Early Glass of Canterbury*, p. 41, where her statement "In tracing atelier traditions, ornament is often more useful than figure compositions and style" is undercut somewhat by her admission that "patterns may equally be passed from one shop to another without significant stylistic exchange." See also Raguin, *Thirteenth-Century Burgundy*, and the manifest destiny of this method in *ibid.*, p. 79, note 104. Cf. Michael W. Cothren, "The Choir Windows of Agnières (Somme) and a Regional Style of Gothic Glass Painting," *Journal of Glass Studies*, 28, 1986, pp. 47–65, where it is argued that two separate workshops shared ornament and window designs and are distinguished by stylistic features of a different sort.

49 The problems of seeking to define the character of a workshop principally through the stylistic analysis of figural scenes are articulated by Caviness in a penetrating discussion of the importance of filtering out the effect of iconographic source material and widely used traditional *moduli* before coming to conclusions concerning personal or workshop figure style: "Stained Glass at Saint-Denis," pp. 262–266.

50 E.g., Louis Grodecki, in Marcel Aubert, et al., *Les vitraux de Notre-Dame et de la Sainte-Chapelle de Paris* (Corpus Vitrearum Medii Aevi, France, I), Paris, 1959, pp. 92–93; Raguin, *Thirteenth-Century Burgundy*, p. 73; Linda Morey Papanicolaou, "Stained Glass Windows of the Choir of the Cathedral of Tours," Ph.D. Dissertation, New York University, New York, 1979, pp. 156–198; Cothren, "Choir of the Cathedral of Beauvais," pp. 79–81.

51 E.g., Grodecki, "Stained Glass *Atelier*," p. 88; *idem*, "Le 'maître du Bon Samaritain'" (where he uses the terms "maître" and "atelier" interchangeably); Papanicolaou, "Choir of the Cathedral of Tours," pp. 156–159; Catherine Brisac and Jean-Jacques Gruber, "Le métier de maître verrier," *Métiers d'art*, 2, 1977, p. 27. See also note 55.

52 E.g., Grodecki in *Les vitraux de Notre-Dame*, pp. 92–93, where several "maîtres" within the "atelier principal" of the Sainte-Chapelle are distinguished through qualitative assessment of their work but without singling out any one as its head.

53 E.g., Grodecki and Brisac, *Le vitrail gothique*, pp. 31–32; Caviness, *Early Glass of Canterbury*,

pp. 36–37 (where it is argued that within a large shop several masters leading teams of assistants took responsibility for individual windows); Papanicolaou, "Choir of the Cathedral of Tours," pp. 156–159.

54 E.g., Grodecki, in *Les vitraux de Notre-Dame*, pp. 92–93; Cothren, "Choir of the Cathedral of Beauvais," pp. 175–178.

55 E.g., Caviness and Raguin, "Another Dispersed Window," p. 196; Papanicolaou, "Choir of the Cathedral of Tours," p. 156; Cothren, "Choir of the Cathedral of Beauvais," pp. 81, 175–178. The imposition of this seductive hierarchical assumption can lead to subtle (unconscious?) reinterpretation in citing the views of a previous author. See Caviness and Raguin, "Another Dispersed Window," p. 191, where in citing Grodecki's work on the Sainte-Chapelle (in *Les vitraux de Notre-Dame*, pp. 92–93), the artist he distinguished as the most talented of those working in the "atelier principal"—the Passion Master—is elevated to the rank of master of the workshop, his associates designated as assistants. Although he did distinguish these masters qualitatively, Grodecki assiduously avoided designating one of the hands working in the work as *the* master.

56 E.g., Raguin, "Jesse Tree Prophet," p. 31.

57 E.g., Hayward in *Royal Abbey of Saint-Denis at the Time of Abbot Suger*, p. 80; Raguin, *Thirteenth-Century Burgundy*, p. 73; *idem*, "Jesse Tree Prophet," p. 31.

58 E.g., Caviness and Raguin, "Another Dispersed Window," p. 196: "... one is tempted to suppose that the glass [at Soissons] was executed by minor painters from the atelier [of the Sainte-Chapelle], who, once removed from the dominance of the Master's personal expression, began to assert a stylistic independence that produced works at once more expressive ... and more banal ...."

59 E.g., Raguin, "Jesse Tree Prophet," p. 31: "An apprentice must have acquired his skill through the repetitious production of floral borders and decorative backgrounds before beginning to work on figural panels."

60 E.g., Hayward, in *Royal Abbey of Saint-Denis at the Time of Abbot Suger*, p. 67; Raguin, "Jesse Tree Prophet," p. 31; Meredith Parsons Lillich, "Bishops from Evron: Three Saints in the Pitcairn Collection and a Fourth in the Philadelphia Museum," in *Studies on Medieval Stained Glass. Selected Papers from the XIth International Colloquium of the Corpus Vitrearum, New York, 1—6 June 1982* (Corpus Vitrearum, United States, Occasional Papers, 1), New York, 1985, p. 99.

61 E.g., Hayward, in *Radiance and Reflection*, pp. 95–97; Caviness, *Early Glass of Canterbury*, pp. 36–37; Cothren, "Choir of the Cathedral of Beauvais," p. 115.

62 E.g., Caviness and Raguin, "Another dispersed Window," p. 192; Raguin, *Thirteenth-Century Burgundy*, pp. 74, 112–113.

63 E.g., Grodecki, *Le vitrail roman*, p. 27; Caviness, *Early Glass of Canterbury* pp. 36, 85 ("'Atelier' should be defined here in the broadest sense, as artisans who shared the same pattern book."), 95 ("The cumulative experience of the Canterbury-Sens atelier was probably collected in model or motif books."); Caviness and Raguin, "Another Dispersed Window," pp. 192, 197 note 15; Raguin, *Thirteenth-Century Burgundy*, pp. 74, 112–113; *idem*, "Jesse Tree Prophet," p. 32 ("Although no pattern books survive from this period, it now appears certain that workshops possessed small-scale drawings on vellum that recorded specific drapery motifs, medallion designs, ornament, and facial types. These models abetted uniformity of design within a workshop, acquainted apprentices with prevailing traditions, and helped disseminate artistic ideas from site to site."). Cf. Cothren, "Choir Windows of Agnières," p. 51 and note 23, where, following the theory formulated by Branner in his study of thirteenth-century manuscript production (*Manuscript Painting in Paris*, pp. 19–21), visual memory formed by training and travel (of artists, not books) is proposed as an alternative to the hypothetical model book.

64 E.g., Raguin, *Thirteenth-Century Burgundy*, pp. 74, 112–113.

65 Grodecki, "Le maître de Saint Eustache," might be cited as a type study were he not clearly arguing for a traveling artist rather than a traveling workshop (cf. citation of this study in Virginia Raguin, "Windows of Saint-Germain-lès-Corbeil: A Traveling Glazing Atelier," *Gesta*, 15, 1976, p. 265). For traveling workshops, see

Brisac and Gruber, "Le métier," p. 28 (where traveling of artists and workshops seems to be conflated); Caviness, *Early Glass of Canterbury*, p. 85; Raguin, *Thirteenth-Century Burgundy*, pp. 52–58, 113; *idem*, "Jesse Tree Prophet;" Papanicolaou, "Stained Glass from the Cathedral of Tours," p. 63; *idem*, "St. Martin and the Beggar. A Stained Glass Workshop from the Lady Chapels of the Cathedrals of Le Mans and Tours," in *Studies on Medieval Stained Glass. Selected Papers from the XIth International Colloquium of the Corpus Vitrearum, New York, 1–6 June 1982* (Corpus Vitrearum, United States, Occasional Papers, 1), New York, 1985, pp. 60–69. For the suggestion that windows, rather than workshops, may have traveled, see Cothren, "Choir Windows of Agnières," p. 61 and note 49.

66 E.g., Grodecki, "Stained Glass *Atelier*," p. 87 (where it is argued that two of the Bourges ateliers were local institutions); Caviness, *Early Glass of Canterbury*, pp. 36–37; Raguin, *Thirteenth-Century Burgundy*, pp. 41–47; Lillich, "Bishops from Evron," p. 101.

67 In the evaluation of architectural forms and their relationship to workshop practices of masons, Michael Davis (*Speculum*, 62, 1987, p. 957) has pointed to a similar circularity in the work of John James.

68 The fragmentary remains of the borders are catalogued and illustrated in Grodecki, *Vitraux de Saint-Denis*, pp. 126–131, pls. 193–208.

69 Interestingly enough, variation in the articulation of ornamental motifs within a border design—such as that noted here in the Glencairn panels—is much less apparent in the more economically conceived borders that became fashionable at the middle of the thirteenth century, further highlighting both the importance accorded ornament at Saint-Denis and the aesthetic premium placed on its variety.

70 Jane Hayward, for example, has divided the six windows discussed here between four workshops, basing her distribution on stylistic analysis at several levels. She assigns the Jesse Tree to one shop; the Infancy and First Crusade/Charlemagne windows to a second; the Anagogical and Moses windows to a third; and the Benedict window to a fourth. See *Royal Abbey of Saint-Denis in the Time of Abbot Suger*, pp. 65–67. Louis Grodecki, on the other hand, grouped five of the windows together as the product of a single shop. He recognized the formal distinctions that inspired Hayward to create further sub-divisions, but emphasized the underlying stylistic affinities that bind them and ascribed what he saw as incidental variations to group production by more than one master and many assistants working together in one shop. Because he saw its style as more fundamentally different, however, Grodecki assigned the Benedict window to a separate workshop. See *Le vitrail roman*, pp. 96–100; and "The Style of the Stained Glass Windows of Saint-Denis," *Abbot Suger and Saint-Denis: A Symposium*, ed. Paula Lieber Gerson, NewYork, 1986, pp. 273–281.

71 For this blue glass, see note 28.

72 For the interplay of style and technique in the interpretation of another workshop situation, see Cothren, "Choir Windows of Agnières," esp. pp. 60–61.

73 *Ibid.*, pp. 52–55, 60–61.

74 Although they do not invoke a discussion of physical evidence as stressed here, collective shops responsible for entire glazings and embracing artists (even "masters") of distinct stylistic character have been proposed at Saint-Père de Chartres (Meredith Parsons Lillich, *The Stained Glass of Saint-Père de Chartres*, Middletown, Connecticut, 1978, p. 192; *idem*, "Bishops from Evron," p. 101), Canterbury (Caviness, *Early Glass of Canterbury*, pp. 36–37), and the Sainte-Chapelle (Raguin, *Thirteenth-Century Burgundy*, p. 99 note 104).

75 For this text, see notes 42–43.

76 This assumption is not without problems. Jean Lafond (*Le vitrail: origines, technique, destinées*, Paris, 1978, pp. 54–55) has cautioned against generalizing from Theophilus's testimony that all medieval glass painters made their own glass, citing specifically the danger and awkwardness of constructing kilns and transporting heavy materials in an urban setting, especially since the transportation of the glass itself would have been relatively easy. In the case of abbeys close to forests and outside cities (such as that in which Theophilus lived, and presumably Saint-Denis as well) he allows for production of materials and creation of windows by the same people in the same place. One could

also imagine (though there is little evidence to support or refute the notion) that the same workers made the glass in one site and themselves transported it to another for painting and fabrication. The arguments of White and Van Engen (See note 43) that Theophilus's treatise—far from being simply a how-to-do-it craft manual—was principally intended as an argument for the position of the visual arts within monastic vocation, might initially seem to cast some doubt concerning the relationship of what he says to what actually transpired in twelfth-century artists' workshops, monastic or otherwise. Ultimately, however, this very convincing interpretation seems more logically to bolster the validity of his testimony. A distorted representation of prevailing labor practices would actually have detracted from the power of his argument.

77 The panels I have examined from a series of windows associated with a John the Baptist Master, for instance, are made from identical glass and painted with the same paint as the fragments that remain from a Saint Peter window, though stylistically and technically the latter window is strikingly different. See Cothren, "Seven Sleepers," esp. p. 225 note 90.

78 Among the prime candidates for future studies are the dispersed panels from a twelfth-century glazing associated with Troyes, from the early thirteenth-century glazing of Soissons, and the mid-thirteenth–century glazing of the Virgin Chapel of Saint-Germain-des-Prés. The nave aisle windows of Chartres—currently being restored a few at a time—would have been a very important and revealing case study, but they have not, unfortunately, been made accessible to scholars while dismounted.

79 Caviness, "Stained Glass at Saint-Denis," p. 267; Grodecki, "Style of the Stained Glass Windows of Saint-Denis," pp. 277–279.

80 John James, *The Contractors of Chartres*, 2 vols., Dooralong, Australia, 1979 and 1981. The basics of his method and its revelations, albeit coupled with some especially shaky interpretation grounded in questionable assumptions, is available more accessibly in *idem*, *Chartres, The Masons Who Built a Legend*, London, 1982. James's work has inspired considerable critical response. See, e.g., Lon Shelby, "The Contractors of Chartres," *Gesta*, 20, 1981, 173–178.

81 As pointed out by Shelby (*ibid.*, pp. 174–175), James himself is uncomfortable with the "messiness" of Chartres, excusing artistic license by the patrons' indifference. Shelby, however, even if he asserts (*ibid.*, p. 176) the free creativity of all workers in stone—regardless of the hierarchical workshop system, for which there is, apparently, more evidence in stone cutting than in window making—also feels the need to excuse formal variety by emphasizing its placement in out of the way places: "with the really formidable design problems which the master mason faced, he need not have concerned himself with every detail in the building, particularly those parts which were nonpublic and generally out of sight." (*ibid.*, p. 177) An assumption that without the controlling hand of a master artistic production veres into stylistic chaos presumes a premium on strict formal unity. It is worth questioning whether this interpretive model adequately assesses the aesthetic imperatives that lay behind medieval architectural complexes.

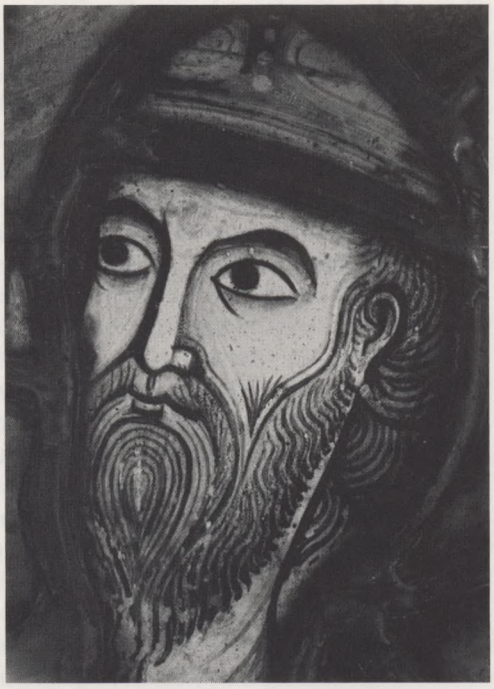

Fig. 2–2 Head of Jeremiah, Infancy of Christ Window (Glasgow, The Burrell Collection) Photo: Cothren.

Fig. 2–3 Head of Simeon in the Presentation in the Temple, Infancy of Christ Window (Twycross, Parish Church of Saint James). Photo: Cothren.

Fig. 2–4 Head of Herod, Infancy of Christ Window (Champs-sur-Marne, Dépôt des Monuments Historiques). Photo: Cothren.

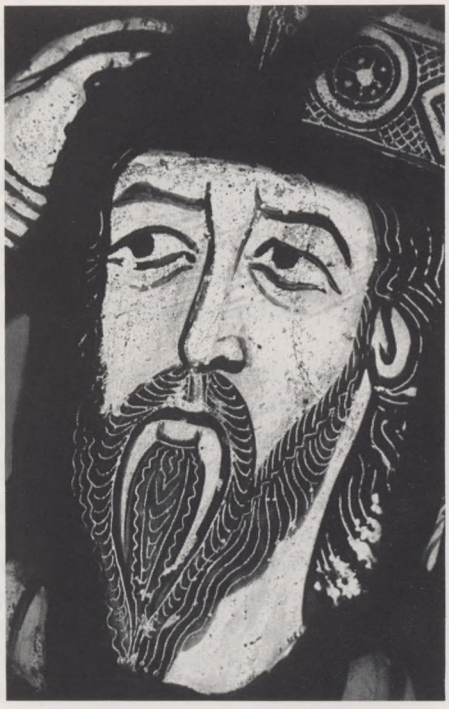

Fig. 2–5 Head of a Magus in the Dream of the Magi, Infancy of Christ Window (Raby Castle, Collection of Lord Barnard). Photo: Cothren.

Fig. 2–6 Head of Joseph in the Flight into Egypt, Infancy of Christ Window (Bryn Athyn, PA, The Glencairn Musem). Photo: Cothren.

Fig. 2–7 Head of the Angel in the Dream of the Magi, Infancy of Christ Window (Raby Castle, Collection of Lord Barnard. Photo: Cothren.

Fig. 2–8 Head of a Shepherd in the Annunciation to the Shepherds, Infancy of Christ Window (Christchurch Borough Council). Photo: Cothren.

Fig. 2–9 Head of Christ in the Flight into Egypt, Infancy of Christ Window (Bryn Athyn, PA, The Glencairn Museum). Photo: Cothren.

(a)

(b)

Fig. 2–10 Heads from the Infancy of Christ Window photographed with surface light to reveal the character of the painting technique: (a) Head in Fig. 2–2; (b) Head in Fig. 2–8. Photos: Cothren.

(a)

(b)

Fig. 2–11 Heads from the Flight into Egypt, Infancy of Christ Window (Bryn Athyn, PA, The Glencairn Museum), photographed with surface light to reveal the character of the painting technique. Photos: Cothren.

Fig. 2–12 Nine Martyred Crusaders, Crusading Window (Bryn Athyn, PA, The Glencairn Museum). Photo: Metropolitan Museum of Art.

Fig. 2–13 Heads of Martyred Crusaders, detail of Fig. 2–12. Photo: Cothren.

Fig. 2–14 Heads of Martyred Crusaders, detail of Fig. 2–12. Photo: Cothren.

Fig. 2–15 Heads of Warriors from a scene of Marching Crusaders, Crusading Window (Bryn Athyn, PA, The Glencairn Museum). Photo: Cothren.

Fig. 2–16 Heads of Warriors from a scene of Marching Crusaders, Crusading Window (Bryn Athyn, PA, The Glencairn Museum). Photo: Cothren.

Fig. 2–17 Eighteenth-Century Drawing of Heads of Byzantine Envoys in the scene of their arrival before Charlemagne, lost panel from the Crusading Window (Paris, Bibliothèque Nationale, MS fr. 15634, fol. 107). Photo: BN.

Fig. 2–18 Eighteenth-Century Drawing of Heads of Warriors, lost panel from the Crusading Window (Paris, Bibliothèque Nationale, MS fr. 15634, fol. 159). Photo: BN.

Fig. 2–19 Eighteenth-Century Drawing of Heads of Warriors, lost panel from the Crusading Window (Paris, Bibliothèque Nationale, MS fr. 15634, fol. 158) (photo: BN)

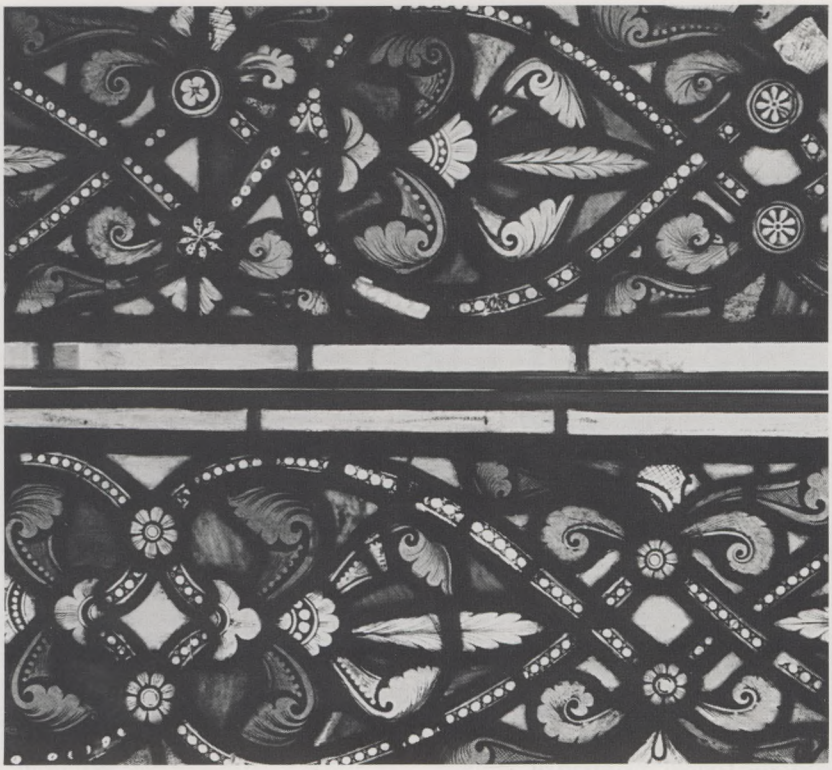

Fig. 2–20 Two panels from the border of the Moses (?) Window (Bryn Athyn, Pa, The Glencairn Musem). Photo: Cothren.

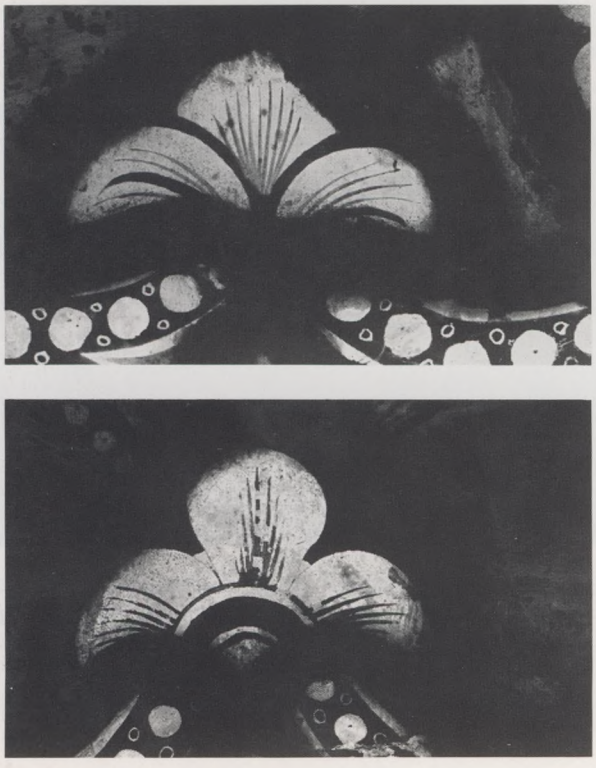

Fig. 2–21 Details of Fig. 2–20.

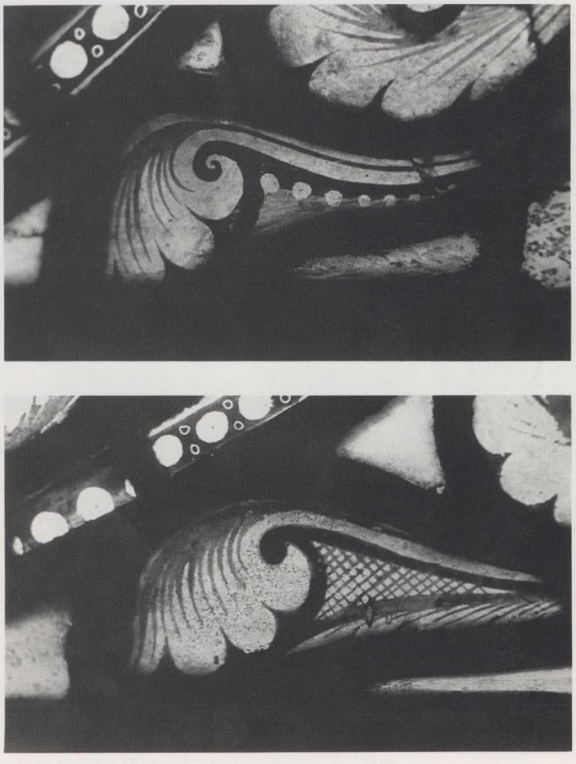

Fig. 2–22 Details of Fig. 2–20.

Fig. 2–23 Head of "Eclesia," Anagogical Window (panel installed at Saint-Denis). Photo: Cothren.

Fig. 2–24 Head of "Sinagoga," Angogical Window (panel installed at Saint-Denis). Photo: Cothren.

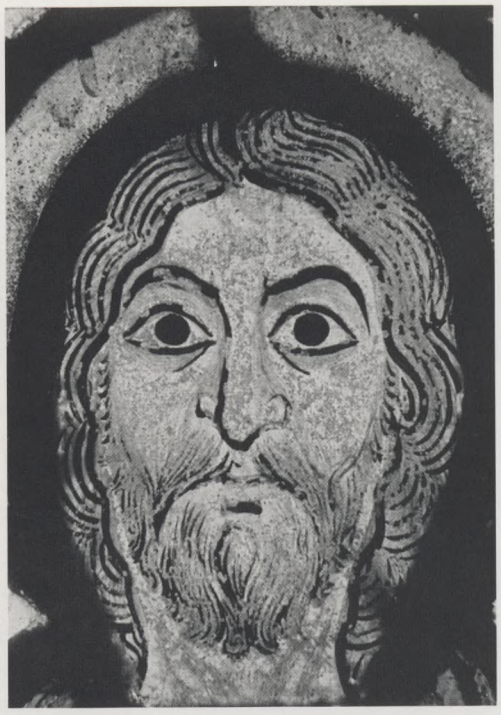

Fig. 2–25 Head of Christ, Anagogical Window (panel installed at Saint-Denis). Photo: Cothren.

Fig. 2–26 Head of an Angel, Anagogical Window (panel installed at Saint-Denis). Photo: Cothren.

(a)

(b)

Fig. 2–27 Heads of figures adoring the Brazen Serpent (a) and crossing through the Red Sea (b), Moses Window (panels installed at Saint-Denis). Photos: Cothren.

Fig. 2–28 Head of a figure from the Moses Window (panel installed at Saint-Denis). Photo: Cothren.

Fig. 2–29 Head of Saint Benedict, Saint Benedict Window (Raby Castle, Collection of Lord Barnard). Photo: Cothren.

Fig. 2–30 Head of Saint Benedict, Saint Benedict Window (Twycross, Parish Church of Saint James). Photo: Cothren.

Fig. 2–31 Head of Saint Benedict, Saint Benedict Window (Twycross, Parish Church of Saint James). Photo: Cothren.

Fig. 2–32 Head of a monk, Saint Benedict Window (Twycross, Parish Church of St. James). Photo: Cothren.

(a)

(b)

Fig. 2–33 Heads from the Saint Benedict Window (Christchurch Borough Council) photographed with surface light to reveal the character of the painting technique. Photos: Cothren.